

In the Claims

Applicant has submitted a new complete claim set showing marked up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

Please cancel claims 157 and 166 without prejudice or disclaimer.

Please amend pending claims 22, 25, 155, 156, 164 and 165 as noted below.

1-21. (Canceled)

22. (Currently Amended) A method of treating a subject to attach microparticles to a body tissue of the subject comprising

contacting the body tissue in the presence of endogenous or exogenous transglutaminase with microparticles having surface available transglutaminase substrate reactive groups in an amount sufficient to attach the microparticles to the body tissue in the presence of the transglutaminase,

allowing the microparticles to remain in contact with the body tissue for a time sufficient to permit a layer of microparticles to covalently attach to the body tissue,

wherein the transglutaminase substrate reactive groups are part of a polymer, and

wherein the polymer comprises a polymer selected from the group consisting of polymers containing:

- (a) at least two contiguous linked lysines,
- (b) at least three contiguous linked lysines,
- (c) at least four contiguous linked lysines, and
- (d) at least five contiguous linked lysines.

23-24. (Canceled)

25. (Currently Amended) A method of treating a subject to attach microparticles to a body tissue of the subject comprising

contacting the body tissue in the presence of endogenous or exogenous transglutaminase with microparticles having surface available transglutaminase substrate reactive groups in an amount sufficient to attach the microparticles to the body tissue in the presence of the transglutaminase,

allowing the microparticles to remain in contact with the body tissue for a time sufficient to permit a layer of microparticles to covalently attach to the body tissue,

wherein the transglutaminase substrate reactive groups are part of a polymer, and

wherein the polymer comprises a polymer selected from the group consisting of polymers containing:

- (a) at least five contiguous linked glutamines,
- (b) at least ten contiguous linked glutamines,
- (c) at least fifteen contiguous linked glutamines, and
- (d) at least twenty contiguous linked glutamines.

26-101. (Canceled)

102. (Previously Presented) A composition comprising a microparticle comprising an active agent and a polymer having transglutaminase substrate reactive groups, wherein the microparticle is non-biodegradable, and the transglutaminase substrate reactive groups are surface available, and the polymer comprises a polymer of amino acids having at least three contiguous linked lysines.

103-116. (Canceled)

117. (Previously Presented) The composition of claim 102, wherein the transglutaminase substrate reactive groups are surface available in an amount sufficient to attach the microparticle to a body tissue in the presence of endogenous transglutaminase.

118. (Previously Presented) The composition of claim 102, wherein the transglutaminase substrate reactive groups are surface available in an amount sufficient to attach the microparticle to a body tissue in the presence of exogenous transglutaminase.

119. (Previously Presented) The composition of claim 102, wherein the polymer comprises a polymer of amino acids and wherein at least 50% of the amino acids are lysine.

120-122. (Canceled)

123. (Previously Presented) A composition comprising a microparticle comprising an active agent and a polymer having transglutaminase substrate reactive groups, wherein the transglutaminase substrate reactive groups are surface available, and the polymer comprises a polymer of amino acids having at least three contiguous linked glutamines.

124. (Previously Presented) The composition of claim 123, wherein the transglutaminase substrate reactive groups are surface available in an amount sufficient to attach the microparticle to a body tissue in the presence of endogenous transglutaminase.

125. (Previously Presented) The composition of claim 123, wherein the transglutaminase substrate reactive groups are surface available in an amount sufficient to attach the microparticle to a body tissue in the presence of exogenous transglutaminase.

126-134. (Canceled)

135. (Previously Presented) The composition of claim 123, wherein the polymer is covalently linked to a synthetic polymer.

136. (Previously Presented) The composition of claim 123, wherein the polymer comprises a polymer of amino acids and wherein at least 20% of the amino acids are glutamines.

137-144. (Canceled)

145. (Previously Presented) The method of claim 22, wherein the polymer is a polymer containing at least two contiguous linked lysines.

146. (Previously Presented) The method of claim 22, wherein the polymer is a polymer containing at least three contiguous linked lysines.

147. (Previously Presented) The method of claim 22, wherein the polymer is a polymer containing at least four contiguous linked lysines.

148. (Previously Presented) The method of claim 22, wherein the polymer is a polymer containing at least five contiguous linked lysines.

149. (Previously Presented) The method of claim 25, wherein the polymer is a polymer containing at least five contiguous linked glutamines.

150. (Previously Presented) The method of claim 25, wherein the polymer is a polymer containing at least ten contiguous linked glutamines.

151. (Previously Presented) The method of claim 25, wherein the polymer is a polymer containing at least fifteen contiguous linked glutamines.

152. (Previously Presented) The method of claim 25, wherein the polymer is a polymer containing at least twenty contiguous linked glutamines.

153-154. (Canceled)

155. (Currently Amended) The method of claim 22, wherein the endogenous or exogenous transglutaminase is endogenous transglutaminase.

156. (Currently Amended) The method of claim 22, wherein the endogenous or exogenous transglutaminase is exogenous transglutaminase.

157. (Canceled)

158. (Previously Presented) The method of claim 22, wherein the body tissue is integument.

159. (Previously Presented) The method of claim 158, wherein the integument is skin.

160. (Previously Presented) The method of claim 158, wherein the integument is the surface of the eye.

161. (Previously Presented) The method of claim 158, wherein the integument is a mucous membrane.

162. (Previously Presented) The method of claim 22, wherein the body tissue is an internal tissue.

163. (Previously Presented) The method of claim 22, wherein the microparticles further comprise an active agent.

164. (Currently Amended) The method of claim 25, wherein the endogenous or exogenous transglutaminase is endogenous transglutaminase.

165. (Currently Amended) The method of claim 25, wherein the endogenous or exogenous transglutaminase is exogenous transglutaminase.

166. (Canceled)

167. (Previously Presented) The method of claim 25, wherein the body tissue is integument.

168. (Previously Presented) The method of claim 167, wherein the integument is skin.

169. (Previously Presented) The method of claim 167, wherein the integument is the surface of the eye.

170. (Previously Presented) The method of claim 167, wherein the integument is a mucous membrane.

171. (Previously Presented) The method of claim 25, wherein the body tissue is an internal tissue.

172. (Previously Presented) The method of claim 25, wherein the microparticles further comprise an active agent.

173. (Previously Presented) The composition of claim 102, wherein the active agent is selected from the group consisting of a cosmetic agent, a bulking agent, a hair conditioning agent, a hair fixative, a sunscreen agent, a moisturizing agent, a depilatory agent, an anti-nerve gas agent, a film forming agent, a vitamin, an insect repellant, a coloring agent, a pharmaceutical agent, a ligand-receptor complex and a receptor of a ligand-receptor complex.

174. (Previously Presented) The composition of claim 123, wherein the active agent is selected from the group consisting of a cosmetic agent, a bulking agent, a hair conditioning agent, a hair fixative, a sunscreen agent, a moisturizing agent, a depilatory agent, an anti-nerve gas agent, a film forming agent, a vitamin, an insect repellant, a coloring agent, a pharmaceutical agent, a ligand-receptor complex and a receptor of a ligand-receptor complex.

175. (New) A kit comprising
a package including a container containing the composition of claim 102 and instructions for topically administering the composition to a skin surface.

176. (New) A kit comprising
a package including a container containing the composition of claim 123 and instructions for topically administering the composition to a skin surface.